

Water Treatment Plant Personnel

The Deer Park Water System is operated and maintained by a staff of qualified and highly dedicated water treatment and system maintenance professionals that are state certified through the TCEQ. The current staff of the Water Treatment Plant are listed below:

Carl Stevens, Supervisor	“B” Certification
Darrell McCoy	“C” Certification
Chris Howland, Operator	“A” Certification
David Kent, Operator	“C” Certification
Michael Reid, Operator	“C” Certification
Frank Walker, Lab Technician	“C” Certification
Richard Gaertner, Operator	“C” Certification
Dan Shepherd, Maintenance Technician	
Matt Noland, Maintenance Technician	



The Birth Place of Texas

City of Deer Park Mission Statement

*The mission of the City of Deer Park
is to plan and execute activities
necessary to provide expected quality
services to the citizens so that the
opportunity to enjoy a high quality of
life is afforded to all.*

CITY OF DEER PARK
PUBLIC WORKS DEPARTMENT
P.O. BOX 700
DEER PARK, TEXAS 77536

Bulk Rate
U.S. Postage
PAID
Deer Park, Texas
Permit No. 15

City of Deer Park Public Works Department

Water Treatment Plant ✧ 2117 East "X" Street Deer Park, Texas ✧ 281-478-7205

2008 Drinking Water Quality Report

The Environmental Protection Agency requires that all water systems inform their customers of the quality of the water that they use. This is a requirement of the Clean Water Act. The following information pertains to the water being produced for consumption by the City of Deer Park for its citizens.

Deer Park Water - Safe To Drink

This brochure has been prepared by the City of Deer Park Public Works Department to help Deer Park residents understand more about the city's drinking water. Much of the information contained in this brochure is based on tests conducted in 2004 - 2008 by the U.S. Environmental Protection Agency and the Texas Commission On Environmental Quality. We are pleased to report that during that time, the city's drinking water has exceeded the standards established by these two agencies in all tests. The City of Deer Park has operated a Water Treatment Plant since 1989. One of the unique features of Deer Park's Water Treatment Plant is the state approved water bacteriology laboratory operated by Public Works Department staff. Deer Park is one of a very few small cities in Texas to operate such a facility. Each month this lab examines up to three times more water samples than are required by state and federal regulations. Through the aggressive testing program, Public Works Department staff are able to manage the water treatment process more effectively.

This brochure contains a list of constituents found in Deer Park's drinking water and the results of tests conducted to determine the levels of these constituents. We invite you to contact the Water Treatment Plant at 281-478-7204 if you have questions about any of these materials or would like additional information. As it has been for the past nineteen years, providing safe and reliable drinking water will continue to be the highest priority for the City of Deer Park Public Works Department.

En Espanol: Este reporte le avisa que el departamento de agua de la ciudad de Deer Park continua a proveer agua sona y segura. Para solicitar una copia en espanol, por favor llame al Lupe Garcia - 832-421-7924

Where Do We Get Our Drinking Water?

Deer Park gets surface water from Trinity River via Lake Livingston. This water is purchased from the City of Houston through the Coastal Water Authority. The City of Houston provides an assessment bimonthly of the water that comes from the reservoir, located north of Lynchburg Landing. The water quality assessment aids in planning the proper treatment of the water.

Besides surface water, the City of Deer Park maintains three (3) wells on standby. These wells would be used on an emergency basis if the raw water supply should be interrupted for any reason. These wells draw water from the Gulf Coast Aquifer.

Turning Lake Water Into Drinking Water

Lake water must be treated before it flows through your tap. A large pipe brings the raw water into the plant. The water then undergoes a seven (7) step treatment process:

1. The water is aerated to remove many sources of taste and odor.
2. Chemicals are added to encourage suspended particles in the water to clump together so they become heavy enough to settle to the bottom of the treatment basin.
3. Lime is added to cause dissolved contaminants in the water to settle out.
4. These particles are allowed to settle for several hours.
5. The water is then filtered through more than 3' of coal, sand and gravel.
6. The alkalinity of the water is stabilized so that it will not dissolve metal from plumbing as it passes through the distribution system.
7. The addition of a disinfectant, chloramines (combination of chlorine and ammonia) is added to kill harmful micro-organisms.

Cryptosporidium

Cryptosporidium is a microscopic parasite affecting the digestive tract of humans and animals. It is shed in the feces and when ingested, may result in diarrhea, cramps, fever and other gastrointestinal symptoms.

No specific drug therapy has proven to be effective but people with healthy immune systems usually recover within two weeks. Individuals with weak immune systems, however, may be unable to clear the parasite and suffer chronic and debilitating illness.

There have been no indications that cryptosporidium is present or has been a problem with any water drawn from the Trinity River or any water produced by the City of Deer Park, Surface Water Treatment Plant.

Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline. Call 800-426-4791.

All Drinking Water May Contain Contaminants

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects may be obtained by calling EPA's Safe Drinking Water Hotline at 800-426-4791.

Secondary Constituents

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, may cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

Our Drinking Water Is Regulated

by the Texas Commission on Environmental Quality (TCEQ) and they have determined that certain water quality issues exist which prevent our water from meeting all of the requirements as stated in the Federal Drinking Water Standards. Each issue is listed in this report as violation and we are working closely with the TCEQ to achieve solutions.

Water Sources

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

We Welcome Your Comments

There are many opportunities available to learn more about the City of Deer Park, Public Works and water quality

- o **For questions or concerns about water quality call 281-478-7204**
- o **To request a speaker for your group call 281-478-7253**

The Public Works Department is part of city government. City Council meets the first and third Tuesday each month in the Council Chambers at City Hall located at 710 East San Augustine at 7:30 pm.

CONSUMER CONFIDENCE REPORT

INORGANIC CONTAMINANTS

YEAR (Range)	CONTAMINANT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	MCL	MCLG	UNIT OF MEASURE	SOURCE OF CONTAMINANT
2008-2004	Arsenic	2	0.000	5.000	10	0	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
2008-2004	Barium	0.148	0.037	0.349	2	2	ppm	Discharge of drilling wastes, discharge from metal refineries; erosion of natural deposits.
2005	Fluoride	0.230	0.200	0.300	4	4	ppm	Erosion of natural deposits, water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2008-2005	Nitrate	0.750	0.210	1.100	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2008-2004	Selenium	1.300	0.000	18.700	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
2008-2004	Uranium	0.600	0.000	12.200	30	0	ppb	Erosion of natural deposits.
2008-2004	Combined Radium 226 & 228	0.790	0.000	4.660	5	0	pCi/L	Erosion of natural deposits.
2008-2004	Gross Beta Emitters	3.820	0.000	10.100	50	0	pCi/L	Decay of natural and man-made deposits.
2008-2004	Gross Alpha	4.440	0.000	10.300	15	0	pCi/L	Erosion of natural deposits.

ORGANIC CONTAMINANTS

YEAR (Range)	CONTAMINANT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	MCL	MCLG	UNIT OF MEASURE	SOURCE OF CONSTITUENT
2008-2005	Simazine	0.090	0.000	0.150	4	4	ppb	Herbicide runoff.
2008-2005	Atrazine	0.230	0.000	0.500	3	3	ppb	Runoff from herbicide used on row crops.
2008-2004	Dichloromethane	0.010	0.000	0.700	5	0	ppb	Discharge from pharmaceutical and chemical factories.
2008-2004	Toluene	0.060	0.000	3.700	1000	1000	ppb	Discharge from petroleum factories.
2008-2004	Ethylbenzene	0.070	0.000	2.400	700	700	ppb	Discharge from petroleum refineries.

MAXIMUM RESIDUAL DISINFECTANT LEVEL

YEAR (Range)	CONTAMINANT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	MCL	MCLG	UNIT OF MEASURE	SOURCE OF CONSTITUENT
2008	Chloramine	2.600	2.400	2.700	4	<4.0	ppm	Disinfectant used to control microbes.

TOTAL ORGANIC CARBON (TOC)

YEAR (Range)	CONTAMINANT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	UNIT OF MEASURE	SOURCE OF CONSTITUENT
2008	Source Water	11.69	6.456	16.68	ppm	Naturally present in the environment.
2008	Drinking Water	4.93	2.128	10.12	ppm	Naturally present in the environment.
2008	Removal Ratio	1.35%	.84%	1.84%	% removal*	N/A
* Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.						

DISINFECTION BYPRODUCTS

YEAR (Range)	CONTAMINANT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	MCL			UNIT OF MEASURE	SOURCE OF CONSTITUENT
2008	Total Haloacetic Acids	22.1	11.300	45.100	60			ppb	By-product of drinking water disinfection.
2008	Total Trihalomethanes	17.8	7.200	43.500	80			ppb	By-product of drinking water chlorination.

TURBIDITY

YEAR (Range)	CONTAMINANT	HIGHEST SINGLE MEASUREMENT	MONTHLY % OF SAMLPEs MEETING LIMITS	TURBIDITY LIMITS	UNIT OF MEASURE	SOURCE OF CONSTITUENT
2008	Turbidity	0.80	90.0%	0.3	ntu	Soil runoff.
Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.						

LEAD AND COPPER

YEAR (Range)	CONTAMINANT	THE 90TH PERCENTILE	NUMBER OF SITES EXCEEDING ACTION LEVEL	ACTION LEVEL			UNIT OF MEASURE	SOURCE OF CONSTITUENT
2007	Lead	1.0000	0	15			ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2007	Copper	0.0040	0	1.3			ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

"If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. This water supply is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>."

CONSUMER CONFIDENCE REPORT

COLIFORMS

SUBSTANCE	RANGE OF DETECTION	DEER PARK WATER	PRESENCE IN 5% OF MONTHLY SAMPLES	MAXIMUM CONTAMINATED LEVEL GOAL	POSSIBLE SOURCE OF SUBSTANCE
TOTAL COLIFORMS	0	0	0	0	Human and Animal Fecal Waste
FECAL COLIFORMS	0	0	0	0	Human and Animal Fecal Waste

SECONDARY AND OTHER NOT REGULATED CONSTITUENTS

(No associated adverse health effects)

YEAR (Range)	CONSTITUENT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	SECONDARY LIMIT	UNIT OF MEASURE	SOURCE OF CONSTITUENT
2008-2004	Aluminum	0.0040	0.000	0.0570	0.05	ppm	Corrosion of carbonate rocks such as limestone.
2005	Bicarbonate	94.0000	90.000	104.0000	N/A	ppm	Corrosion of carbonate rocks such as limestone.
2008-2004	Calcium	49.1000	13.000	70.0000	N/A	ppm	Abundant naturally occurring element.
2005	Chloride	66.0000	63.000	73.0000	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2008-2004	Copper	0.0020	0.000	0.0110	1.0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2008-2004	Iron	0.0720	0.000	0.1950	0.30	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
2008-2004	Magnesium	6.3000	3.300	12.8000	N/A	ppm	Abundant naturally occurring element.
2008-2004	Manganese	0.0089	0.000	0.0331	0.05	ppm	Abundant naturally occurring element.
2008-2004	Nickel	0.0010	0.000	0.0030	N/A	ppm	Erosion of natural deposits.
2005	pH	7.5000	7.500	7.5000	>7.0	units	Measure of corrosivity of water.
2008-2004	Sodium	42.0000	22.000	135.0000	N/A	ppm	Erosion of natural deposits; byproduct of oil field activity.
2005	Sulfate	31.0000	30.000	34.0000	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2005	Total Alkalinity at CaCO ₃	77.0000	74.000	85.0000	N/A	ppm	Naturally occurring soluble mineral salts.
2005	Total Dissolved Solids	259.0000	241.000	314.0000	1000	ppm	Total dissolved mineral constituents in water.
2005	Total Hardness as CaCO ₃	166.0000	166.000	166.0000	N/A	ppm	Naturally occurring calcium.
2008-2004	Zinc	0.0080	0.000	0.1560	5	ppm	Moderately abundant naturally occurring element; used in the metal industry

UNREGULATED CONTAMINANTS

YEAR (Range)	CONTAMINANT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	UNIT OF MEASURE	SOURCE OF CONTAMINANT
2008-2004	Dibromomethane	0.03	0.0	2.3	ppb	Byproduct of drinking water disinfection.
2008-2004	Chloroform	5.94	0.0	72.0	ppb	Byproduct of drinking water disinfection.
2008-2004	Bromoform	0.69	0.0	13.0	ppb	Byproduct of drinking water disinfection.
2008-2004	Bromodichloromethane	4.07	0.0	42.0	ppb	Byproduct of drinking water disinfection.
2008-2004	Dibromochloromethane	2.05	0.0	20.0	ppb	Byproduct of drinking water disinfection.

Understanding The Chart

This list explains the terms that are used in the following chart

NTU - Nepholometric Turbidity Units. This is the unit used to measure water turbidity.

Maximum Contaminant Level Goal (MCLG) - The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Action Level - The concentration of a contaminant that, if exceeded triggers treatment or other requirements that a water system must follow.

Turbidity - A measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

ppm - Parts per million. One part per million is equal to one packet of artificial sweetener sprinkled into 250 gallons of iced tea.

ppb - Parts per billion. One part per billion is equal to one packet of artificial sweetener sprinkled into an Olympic-size swimming pool.

Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

pCi/L - Picocuries per liter is a measure of radioactivity in water. A picocurie is 10⁻¹² curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

N/A - MCL not applicable - not regulated. Special monitoring requirements.

Maximum Residual Disinfectant Level (MRDL) - The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk of health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MFL - Million fibers per liter (a measure of asbestos)

ppt - Parts per trillion, or nanograms per liter)

ppq - Parts per quadrillion, or picograms per liter

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.